S6161-QQ-FSE-010 REVISION 1

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# TECHNICAL MANUAL

FOR

COOKIE DROPPER, MODEL 17-INCH HANDY;
DESCRIPTION, OPERATION AND MAINTENANCE

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DEPARTMENT OF THE NAVY
NAVAL SEA SYSTEMS COMMAND

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# SAFETY SUMMARY

The following are general safety precautions that are not related to any specific procedures and therefore do not appear elsewhere in this publication. These are recommended precautions that personnel must understand and apply during many phases of operation and maintenance.

## KEEP AWAY FROM LIVE CIRCUITS

Operating personnel must at all times observe all safety regulations. Do not replace components or make adjustments inside the equipment with the voltage supply turned on.

## DO NOT SERVICE OR ADJUST ALONE

Under no circumstances should any person reach into or enter the enclosure for the purpose of servicing or adjusting the equipment except in the presence of someone who is capable of rendered aid.

## RESUSCITATION

Personnel working with or near high voltages should be familiar with modern methods of resuscitation. Such information may be obtained from the Bureau of Medicine and Surgery.

The following warning appears in the text in this volume, and is repeated here for emphasis.

# I N T R O D U C T I O N

For more than 70 years Triumph has built wire cut depositors. In this time a vast knowledge has been gained. As a result of this knowledge and field testing, we are proud to present this new development.

In addition to the durability and long life built into Triumph equipment, special attention was given to simplifying the sanitation procedure.

Satisfactory performance of this machine depends on a thorough understanding of its operation, adjustments and proper lubrication. This manual is presented to assist the operator in obtaining the perfection in product and operation he desires. If any question should arise that is not explained to your satisfaction, please call or write to the factory.

SERIAL NUMBER 40901

When ordering repair parts, always show this serial number on order.

Reference to serial number will not only eliminate possible error, but also expedites shipment of parts ordered.

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SECTION 1

GENERAL INFORMATION


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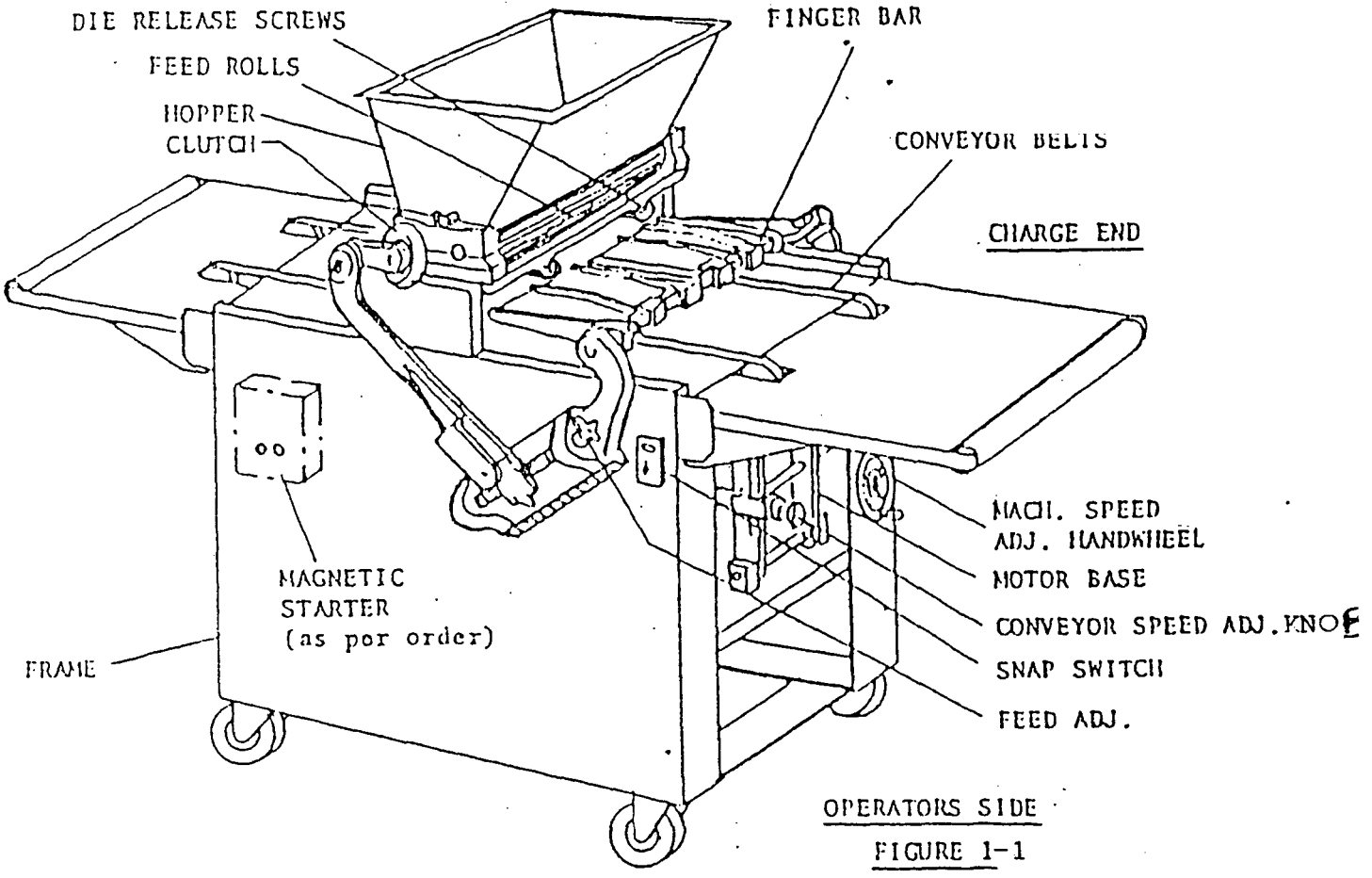
GENERAL INFORMATION

1. DESCRIPTION: Before operating machine or going into detailed operating instructions it will be helpful to acquaint oneself with the various components of the machine. The operators side is shown on figure 1-1.

2. HOPPER: Fabricated stainless steel, welded, can be tilted toward discharge end of table which brings die plate into an accessible position.

3. CONVEYOR ADJUSTMENT KNOB: Located at the charge end of machine, and controls speed of the conveyor belt only.

4. FINGER AND CUT-OFF WIRE: Fingers are mounted on square finger bar and driven by rocker arms. Correct setting of fingers and wire is very important. See page 3-2 for setting.




OPERATORS SIDE

FIGURE 1-1

DESCRIPTION - Cont'd.

5. FEED ROLLS: Driven by gears through a drive clutch assembly. Feed rolls have a space between the rolls which carry the material to the die with a minimum of pressure. They are mounted in split feed roll bearings for easy removal and cleaning.

6. MOTOR AND DRIVE: Motor mounted on adjustable pivot base. Variable speed sheave is mounted on motor shaft and speed is adjusted by turning the machine speed handwheel. All parts are driven by silent vee belts and roller chain and are accessible through ends of machine frame.

7. SPEED ADJUSTMENT HANDWHEEL: Located at the charge end of machine and controls the speed of entire machine, strokes, and conveyor belt.

8. FRAME: Sheet steel and steel plate fabricated into one solid unit. Space is provided in the base for storage. Frame table, end tables and guards are stainless steel.

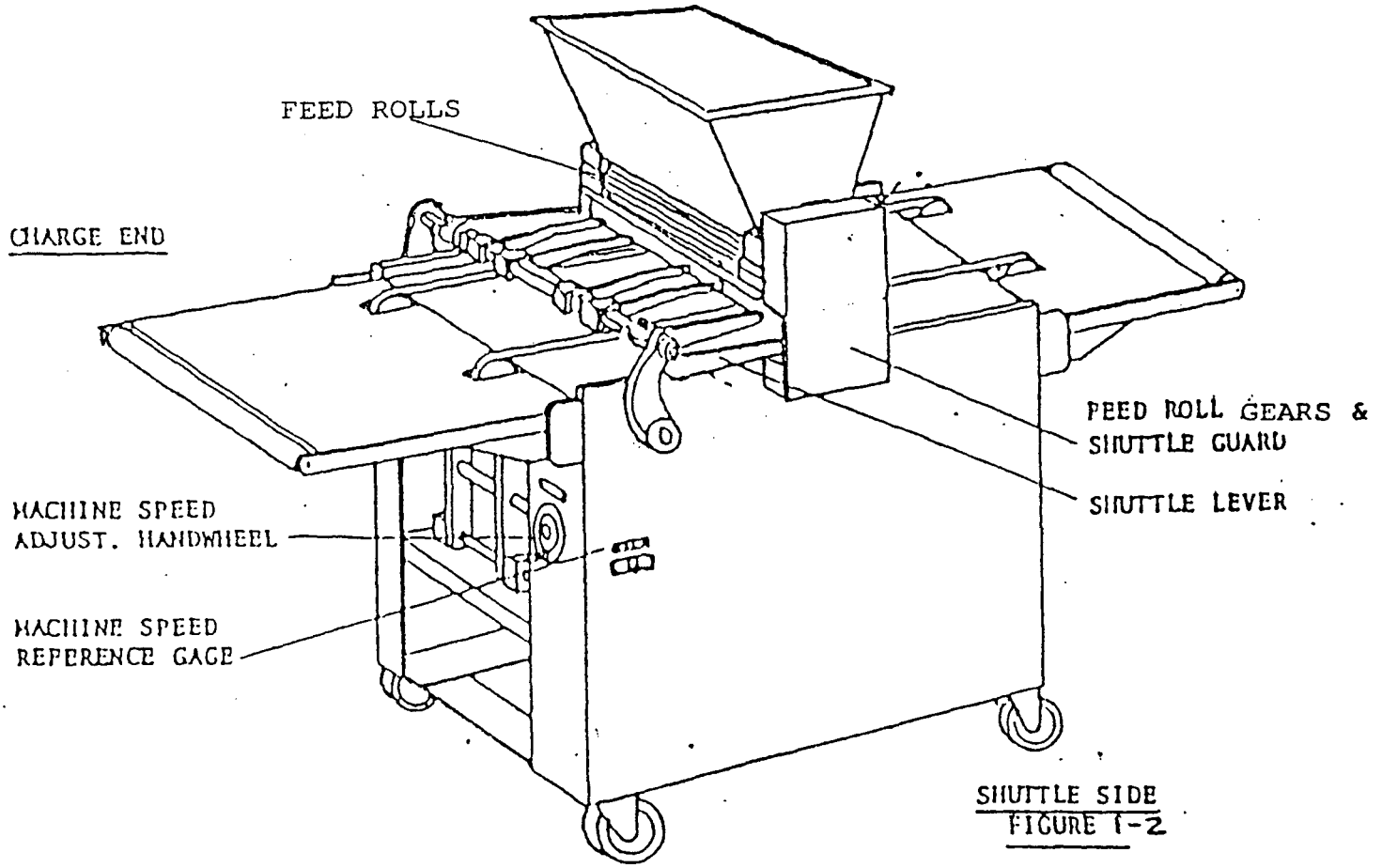


FIGURE 1-2

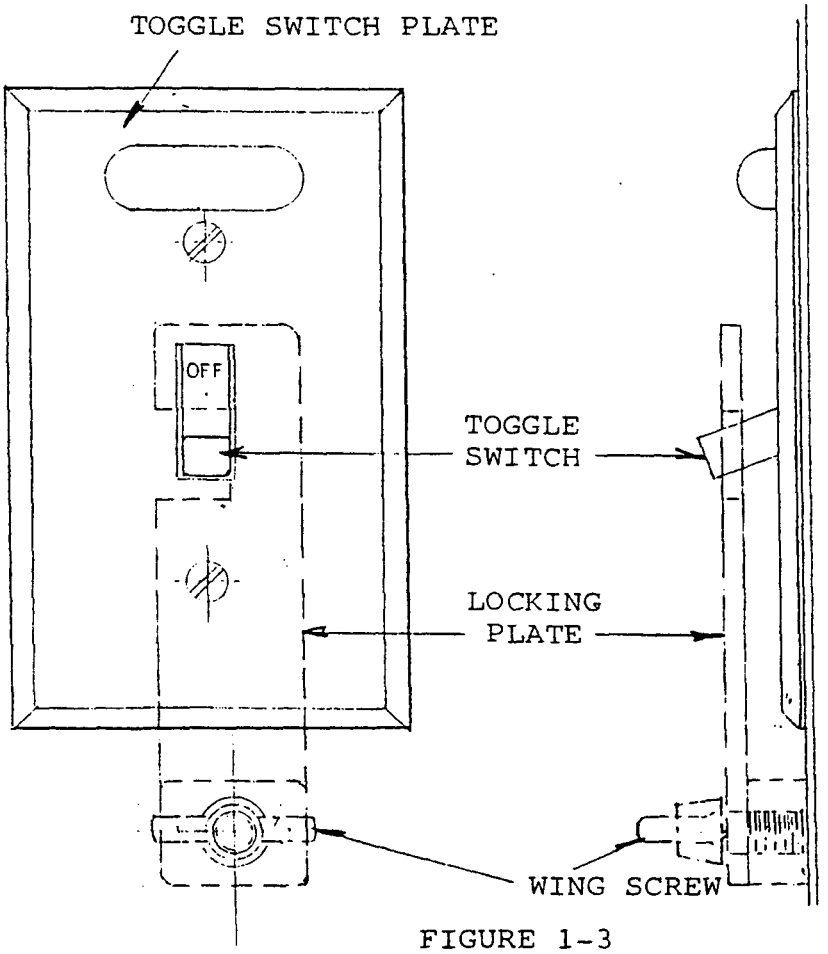



FIGURE 1-3

9. --TOGGLE SWITCH LOCKING DEVICE --

FOR CLEANING: BUTT LOCKING PLATE AGAINST TOGGLE AND TIGHTEN WING SCREW. POSITION AS SHOWN ABOVE.

FOR OPERATION: LOOSEN WING SCREW AND SWING LOCKING PLATE 180° AND TIGHTEN WING SCREW.

SECTION 11

INSTALLATION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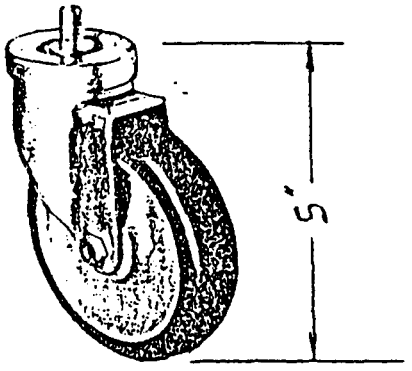
## INSTALLATION

### 1. UNCRATING

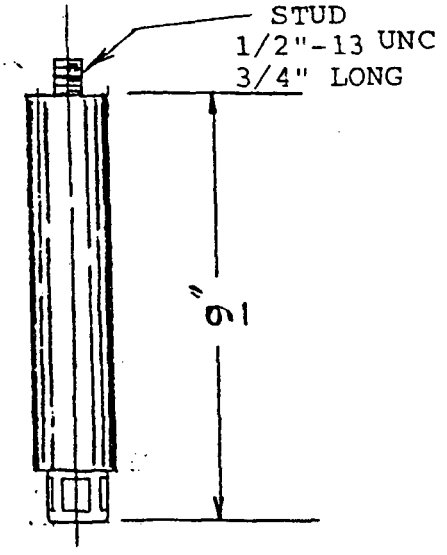
If depositor was damged in transit, notify carrier immediately so claim can be made. The depositor is shipped bolted to a skid with four carriage bolts that run thru the skid, up thru the frame base at corners and depositor is covered with a poly vinyl shroud. Remove the shroud and remove the box that holds the casters. NOTE: On some government depositors the casters are replaced with adjustable legs. If depositor has but one die, it will be mounted on the depositor. If it has more than one die, they will be found in a box located inside base of depositor. REMOVE.

### 2. MOUNTING

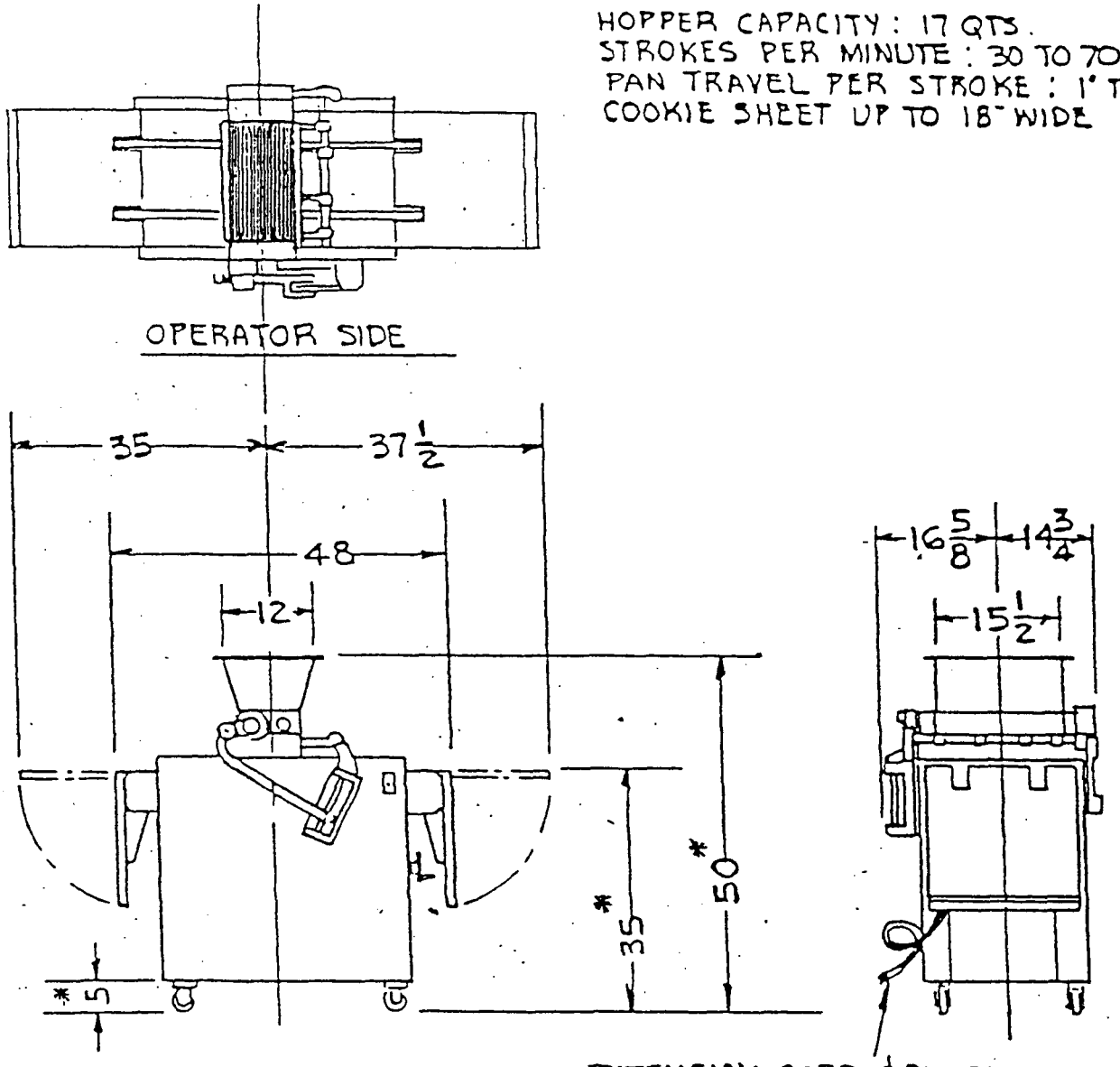
The unit weighs approximately 500 pounds and care should be taken when lifting off of skid. Reach into frame and remove the nut and washers off of carriage bolts (do not disgard) and lift unit from skid. Tilt one end of frame high enough to slip the caster studs thru holes in frame and lock with the nuts and washers from carriage bolts. Repeat for other end. On Government depositors mount the legs (in place of casters) with the material supplied with the legs. See Figures 2-1 and 2-2.




CASTERS ON
STANDARD DEPOSITORS
FIGURE 2-1




ADJUSTABLE LEGS--SPECIAL
ON GOVERNMENT DEPOSITORS
FIGURE 2-2




*NOTE!
ON GOVERNMENT DEPOSITORS WITH 9" ADJUSTABLE LEGS IN PLACE OF CASTERS, ADD 4" TO HEIGHT DIMENSIONS SHOWN.

## HANDY COOKIE DEPOSITOR

DIMENSION DIAGRAM

FIGURE 2-3

SECTION 111

OPERATION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| 9 | ALIGNING CUT-OFF WIRE ..... | 3-5 |

OPERATION

The depositor is started and stopped by an electrical toggle switch or push buttons. The fingers that carry the cut-off wire can be inched forward by quickly snapping the toggle "ON" or "OFF". If the depositor has magnetic starter with push buttons, hold in on the "STOP" and "START" buttons and quickly operate the "STOP" button in and out.

CAUTION: Keep hands clear of feed rolls and finger drive mechanism when depositor is in operation.

Before placing depositor into production it is beneficial to operate the depositor as though it is in production by completing the following:

1. Be sure to plug into correct electrical current which is 115 volt, 60 HZ., 1 PH with switch in "OFF" position.

2. Inch the finger bar forward as explained in the first paragraph until the leading ends of fingers are close to the die pads, see figure 3-1. Open the feed roll guard by tilting forward from top. Tilt the hopper and attach the die to be used. DO NOT start depositor with hopper tilted as this will damage the depositor. Lower the hopper easily down into operating position, close gear guard, loosen the finger wing screws and slide the fingers on shaft until fingers are between the pads of the die, lock wing screws. See page 3-4 and 3-5 for setting cut-off wire. Use the outer most holes in finger for 3" and larger dies, each successive hole in finger is for dies with holes having smaller than 3" in 1" increments.

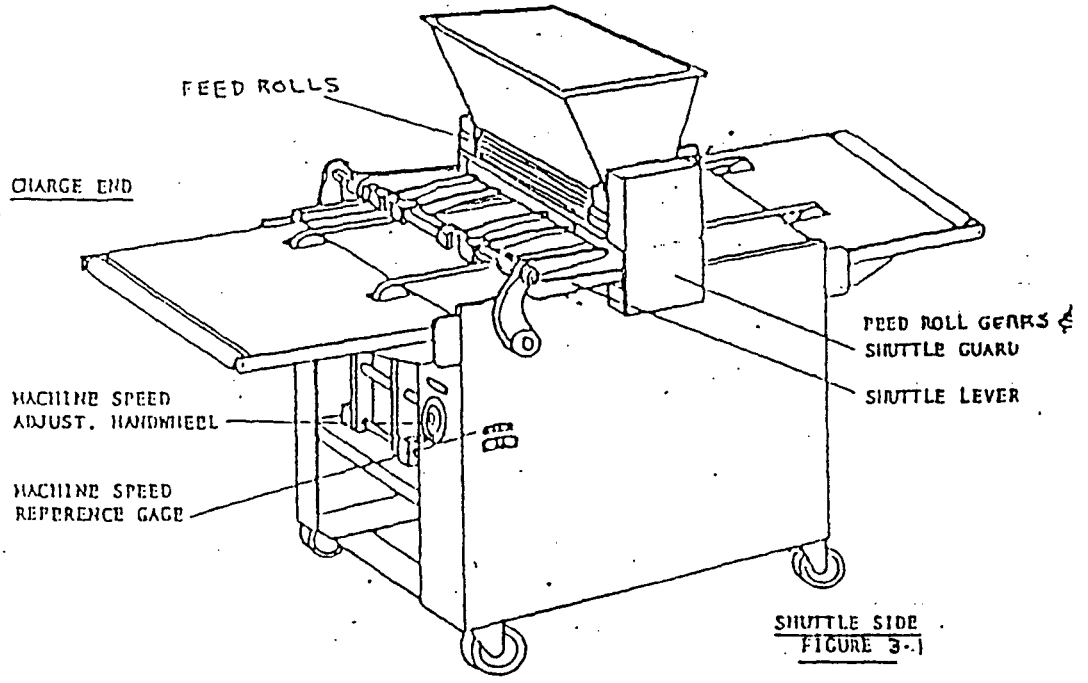


FIGURE 3-1

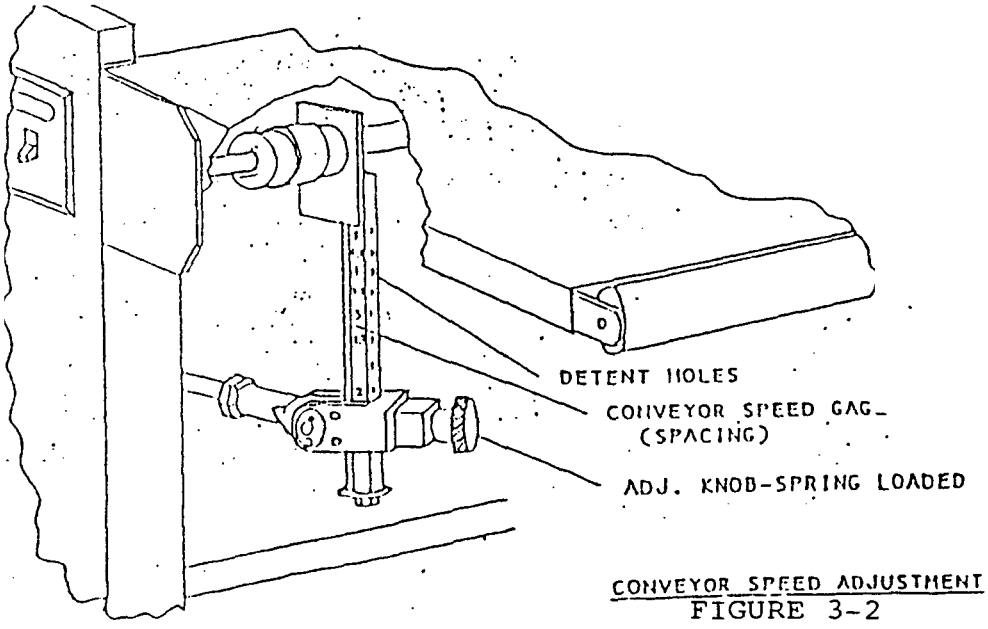
3. Start the depositor by placing the toggle switch in the "ON" position, or by pushing the "START" button.

4. The pans are carried on a pair of belts. The spacing between the row of deposits can be varied as follows: (a) stop the depositor, (b) pull out on conveyor, adjusting knob, (c) slide sliding lock nut "UP" (to increase spacing) or "DOWN" (to decrease spacing), and release adjusting knob so it can engage detents in the square rod. The gage on square rod are approximate spacing per stroke in inches. DO NOT try to change spacing while depositor is running. See figure 3-2.

5. Feed adjustment (amount of deposit) can be made when the depositor is operating or not. A lock screw is provided so setting is not lost while operating. The indicator plate does not indicate weight but is used for reference only, see figure 1-1, page 1-2.

6. The speed of the depositor, strokes per minute and the conveyor speed can be changed in unison by the machine speed adjusting handwheel, figure 1-2 page 1-3. This adjustment must be made while depositor is running.

7. When loading material into the hopper, distribute the material evenly across entire hopper length to keep even pressure over entire die area. DO NOT, under any circumstance, push down on the material by hand while depositor is operating. If material will not extrude, the formulation will have to be changed slightly, ie. more flour, less flour, more milk or water, etc.

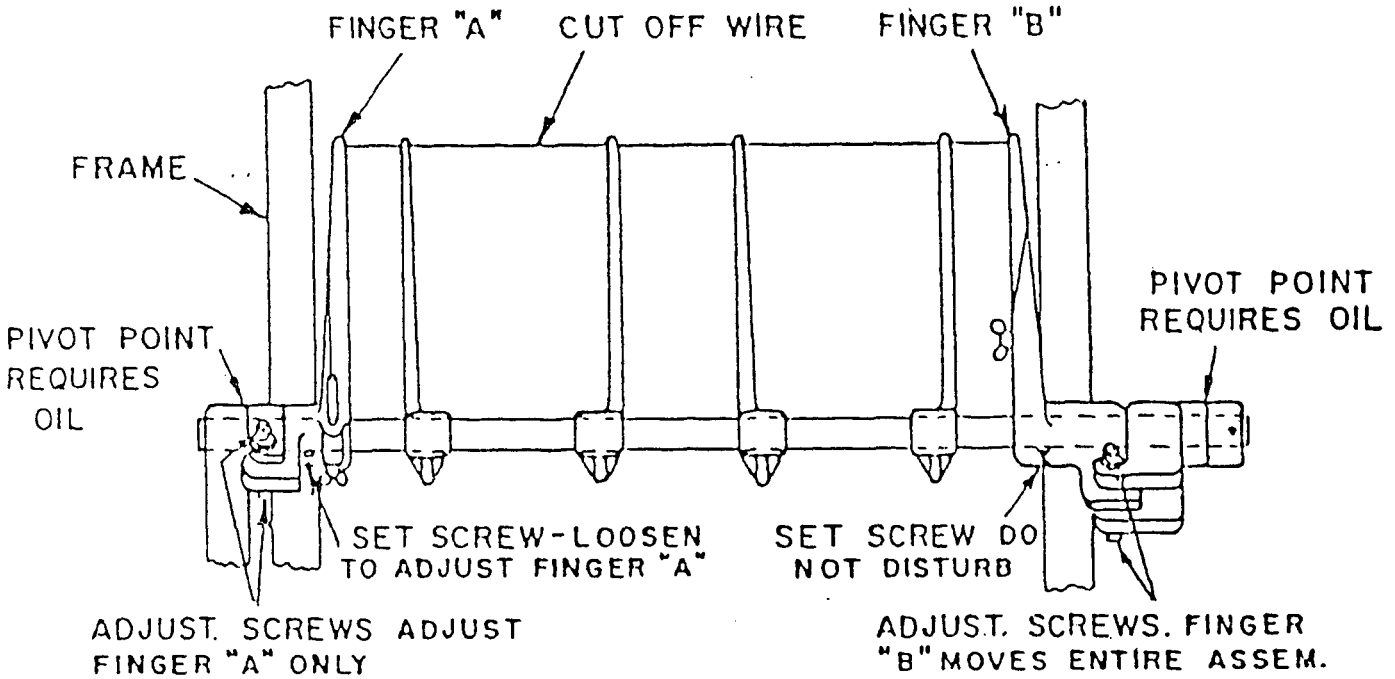



CONVEYOR SPEED ADJUSTMENT
FIGURE 3-2

CORRECTING IMPROPER DEPOSITING

8. Improper adjustment of the cut-off wire may cause some pieces to be deposited upside down, or in irregular rows. The following reference to "Left" and "Right" refer to the sides of the machine when facing it from the "Charge" end of depositor. The front edge of the die is the one you now face and the back edge the one farthest from you, figure 3-3.

   Make sure that all the fingers are in line and that the wire is straight and parallel lengthwise with the die. The fingers must be lined up so that the wire is perfectly straight. If any of the four bronze fingers have been bent they must first be straightened. If, for any reason, the outside finger "A" on the left hand side of the machine is too high or too low in relation to the opposite outside finger "B" so that the wire is not parallel lengthwise with the die, finger "A", (left hand side) must be adjusted to line up with finger "B" (right hand side). First loosen the set screw in finger "A" then loosen the lock nuts at "A" and adjust, then tighten the lock nuts and the set screw.

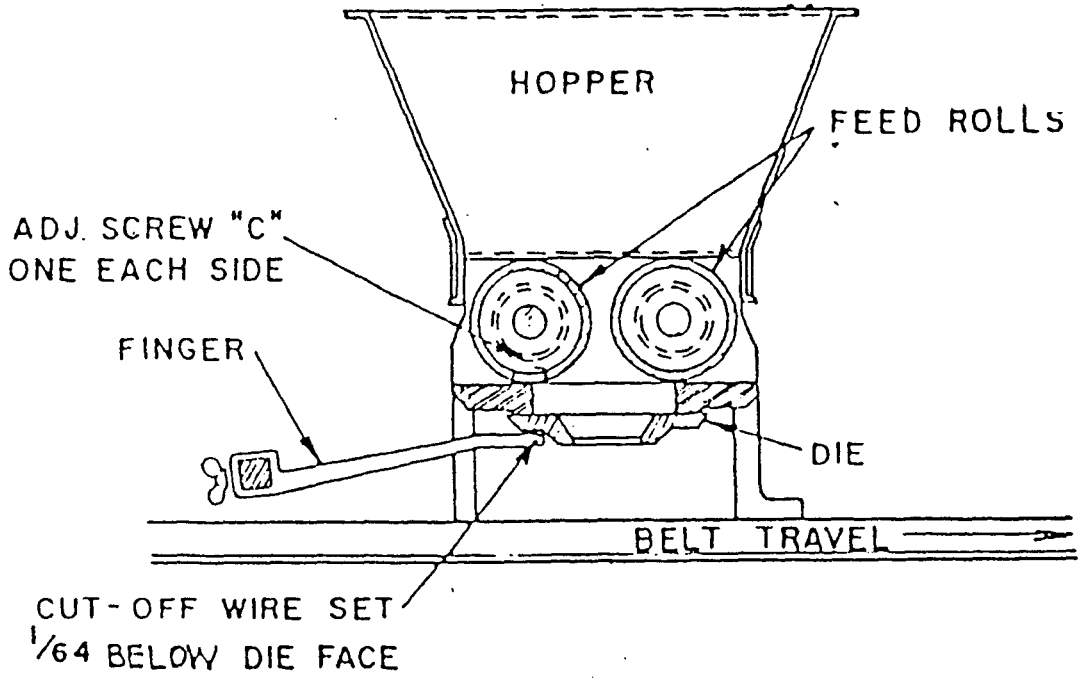



TOP VIEW OF FINGERS
FIGURE 3-3

ALIGNING CUT-OFF WIRE

9. Make sure that the movement of the wire from front to back is parallel to the face of the die. This is very important. The front edge of the hopper assembly to which the die is attached rests on two screws "C" (one at each end). By loosening the lock nuts and turning the screws "C" the front edge of the hopper, and hence the die can be raised or lowered to make the die parallel with the travel of the cut-off wire. Hopper must be tilted forward to adjust these screws.

   After adjusting the screws at both sides for correct height, tighten the lock nuts. Check to make sure the weight of the hopper and die assembly is carried equally on both screws. This can best be done by placing a thin piece of paper between the top of the screws and the hopper. If properly adjusted, both pieces will be held tightly in place by the weight of the hopper and rolls. Make sure that the wire is at the right height in relation to the die. The wire should be set about 1/64" lower than the die opening. Both fingers "A" and "B" and the four bronze fingers are raised as a unit when finger "B" (right hand side) is adjusted. To do this loosen the lock nuts on finger "B", make the proper adjustment for height of wire and re-tighten the lock nuts. Set screw in finger "B" should not be disturbed.




SECTION THRU HOPPER

FIGURE 3-4

SECTION IV

MAINTENANCE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| 3-6 | LUBRICATION (WEEKLY THRU YEARLY) ..... | 4-4 |

## MAINTENANCE

### 1. CLEANING

Before initial operation, and after each day's use, the feed rolls (figure 4-1, page 4-3) must be thoroughly washed and sanitized. Do not delay in cleaning after operating as the material sets which makes taking apart more difficult.

Move the finger shaft assembly so that the finger shaft is away from the hopper section, i.e. toward charge end of depositor. Disconnect from power by removing extension cord from wall receptacle.

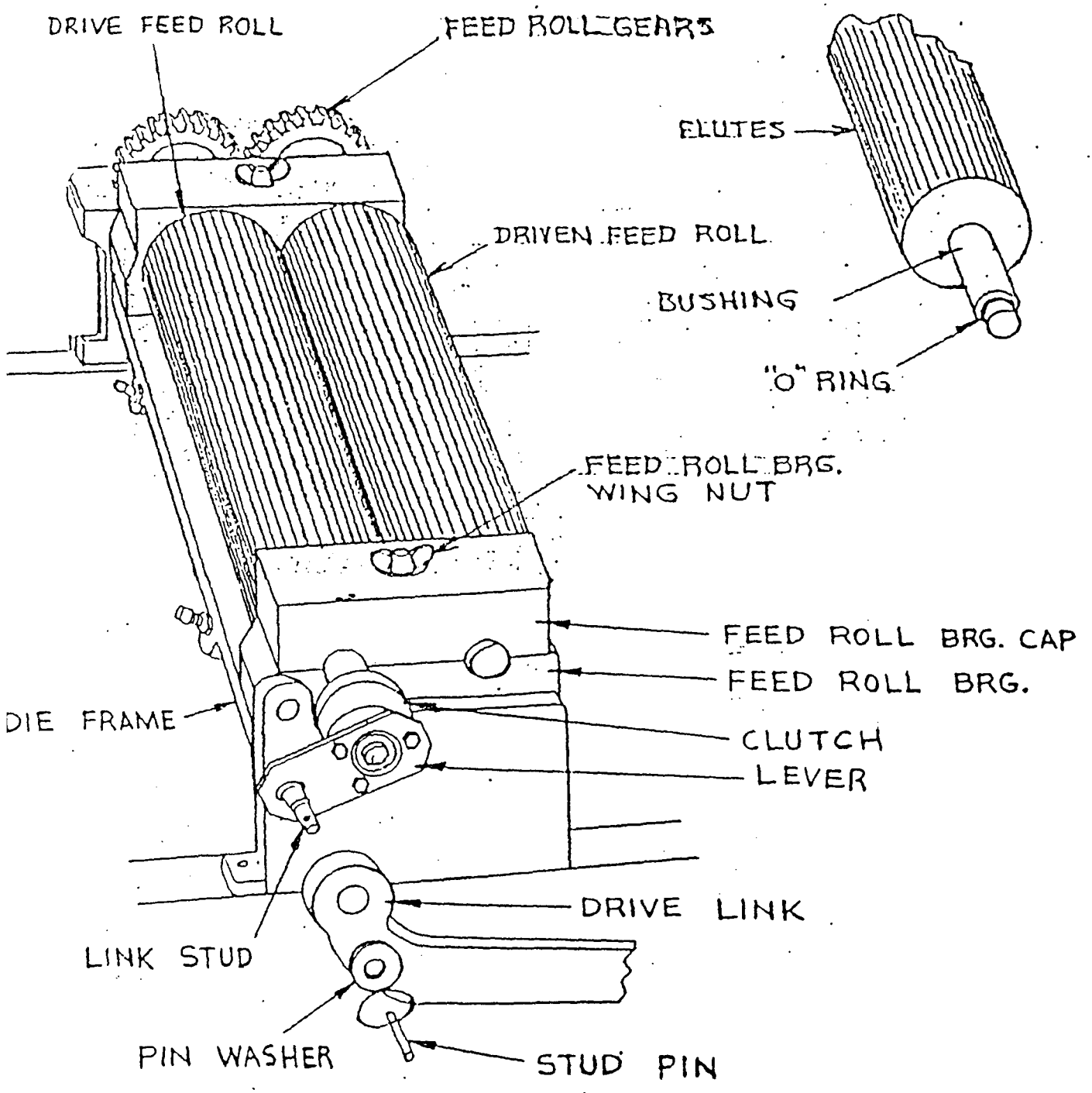
Remove the hopper by removing the two wing nuts, one on each bearing cap, see figure 4-1. Replace nuts finger tight. Hinge the gear cover open at far side of hopper by tilting top of cover away from hopper. Tilt feed rolls toward left end by lifting at finger bar side. Loosen the 2 die screw knobs and remove die, then hinge feed rolls back to operating position being careful not to allow it to drop. Remove the two wing nuts, one in each bearing cap at the end of feed rolls. Pull stud pin out of link stud, remove pin washer and slide end of drive link off of lever. Holding it so it does not fall, lower it gently. Lift bearing caps off, then lift each feed roll out.

DO NOT submerge drive clutch at end of drive feed roll in water or direct live steam against it. This precaution is necessary to protect the precision parts from corrosion. Clean all exposed surfaces.

NOTE: When re-assembled feed rolls in machine, place drive feed roll in its bearings. The drive roll is the one with the clutch mounted on the outer shaft. Place the outer (driven) feed roll on top of the driver roll, with gear teeth in mesh, roll the driven feed roll into its bearings. Replace bearing caps, hopper and two wing nuts. Replace the drive link on the link stud, place pin washer on stud and slip stud pin into and thru hole in link stud.

### 2. LUBRICATION - DAILY

Disconnect power before starting lubrication. Before placing feed rolls back into depositor, if feed roll gears were washed in a sink, brush a light film of edible grease, tallow or salad oil on the gear teeth. Although the nylon bushings on feed roll shafts require no lubrication, the bearing life can be extended by working a film of salad oil between the shaft and bushing. With the end tables in the drop position, place a few drops of oil into the hole on the conveyor shaft bearings, one on each end of shafts.




FEED ROLL ASSEM.

FIGURE 4-1

MAINTENANCE-Cont'd.

3. LUBRICATION-WEEKLY

Once a week brush a light film of grease on top surface of shuttle that is located behind shuttle guard, see Figure 4-2. Check teeth on large crank gear inside of frame on discharge end, if they appear dry brush a light film of grease on the teeth see fig. 4-3, page 4-5.

Using a hand grease gun, grease drive link (both ends) located inside frame. Grease the feed roll link and the adjusting nut, see Figure 4-3. Give 2 or 3 pumps of grease to each grease fitting.

4. LUBRICATION-MONTHLY

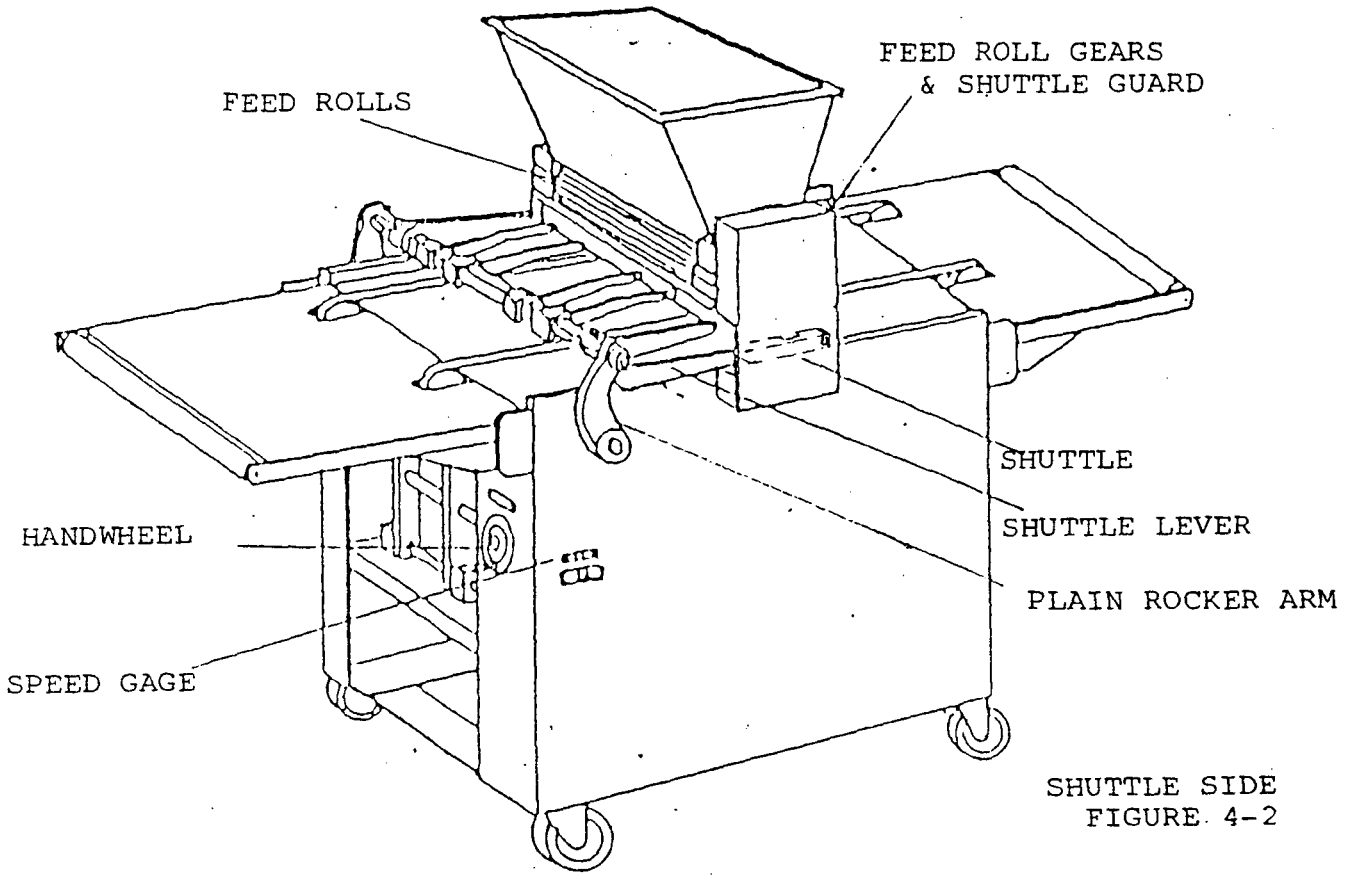
Brush a light coat of grease to the feed adjusting screw, wire adjusting screw and speed adjusting screw attached to handwheel, see Figure 4-3.

5. LUBRICATION-3 to 6 MONTHS

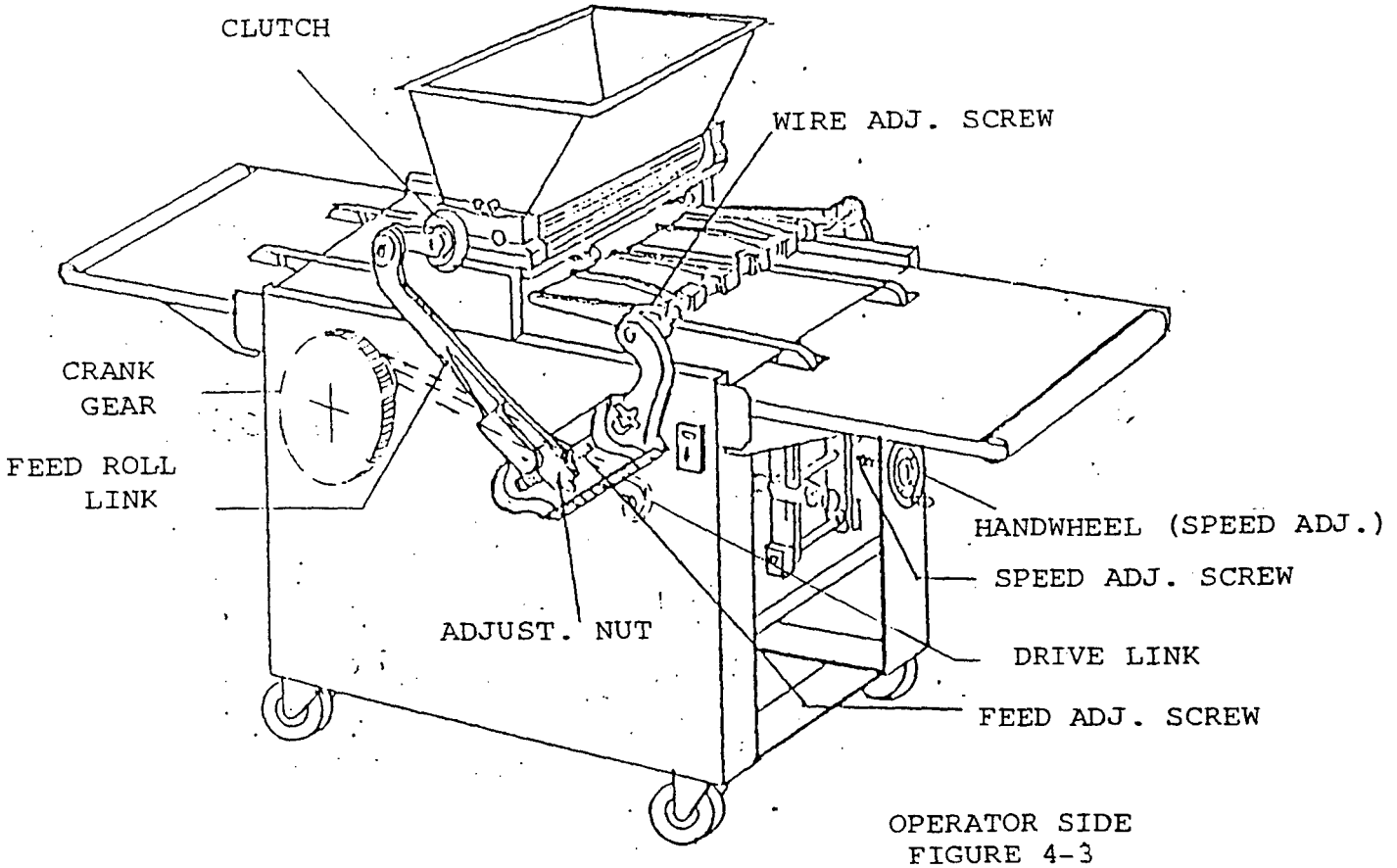
Brush the drive chain (located inside frame) with mineral oil. Remove clutch and "O" rings from feed roll shafts and slide nylon bushings off of shafts. Clean up shafts and coat with edible lubricant and replace parts.

6. LUBRICATION-YEARLY

Remove the drive chain (inside frame) and wash in petroleum solvent. Allow chain to soak for 1/2 hour then run thru solvent while flexing joints to remove residue. Wipe off and let dry for an hour. Lay chain in a pan of white mineral oil, flex joints so oil penetrates joints. Let excess oil drain off and replace in depositor.




SHUTTLE SIDE
FIGURE 4-2




OPERATOR SIDE
FIGURE 4-3

SECTION V

PARTS REPLACEMENT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| 2. | REPLACEMENT OF FEED ROLL SHAFT BUSHINGS ... | 5-2 |
| 3. | REPLACEMENT OF ADJUST. ROCKER ARM BUSH .... | 5-2 |
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| 7. | REPLACEMENT OF CONVEYOR CLUTCH ..... | 5-5 |

CAUTION!!! ALWAYS REMOVE EXTENSION CORD FROM POWER WHEN SERVICING

1. TO REPLACE FEED ROLL CLUTCH

To replace the feed roll clutch it is not necessary to remove the feed roll from the depositor. Remove the detent pin and washer from end of link stud, see figure 5-1 page 5-3 Pull feed roll link outward off of link stud and lower link to lowered position. Mark the position of the inner face of the clutch onto the feed roll shaft. Loosen the set screw in clutch inner hub and pull clutch with lever off of shaft.

With clutch removed, remove the three screws that fasten clutch lever to clutch and attach lever to new clutch. Line up keyway in clutch with key in feed roll shaft and slide clutch forward and up to mark on shaft and lock clutch with set screw. Raise feed roll link, line up with link stud and push onto stud. Replace washer and detent pin.

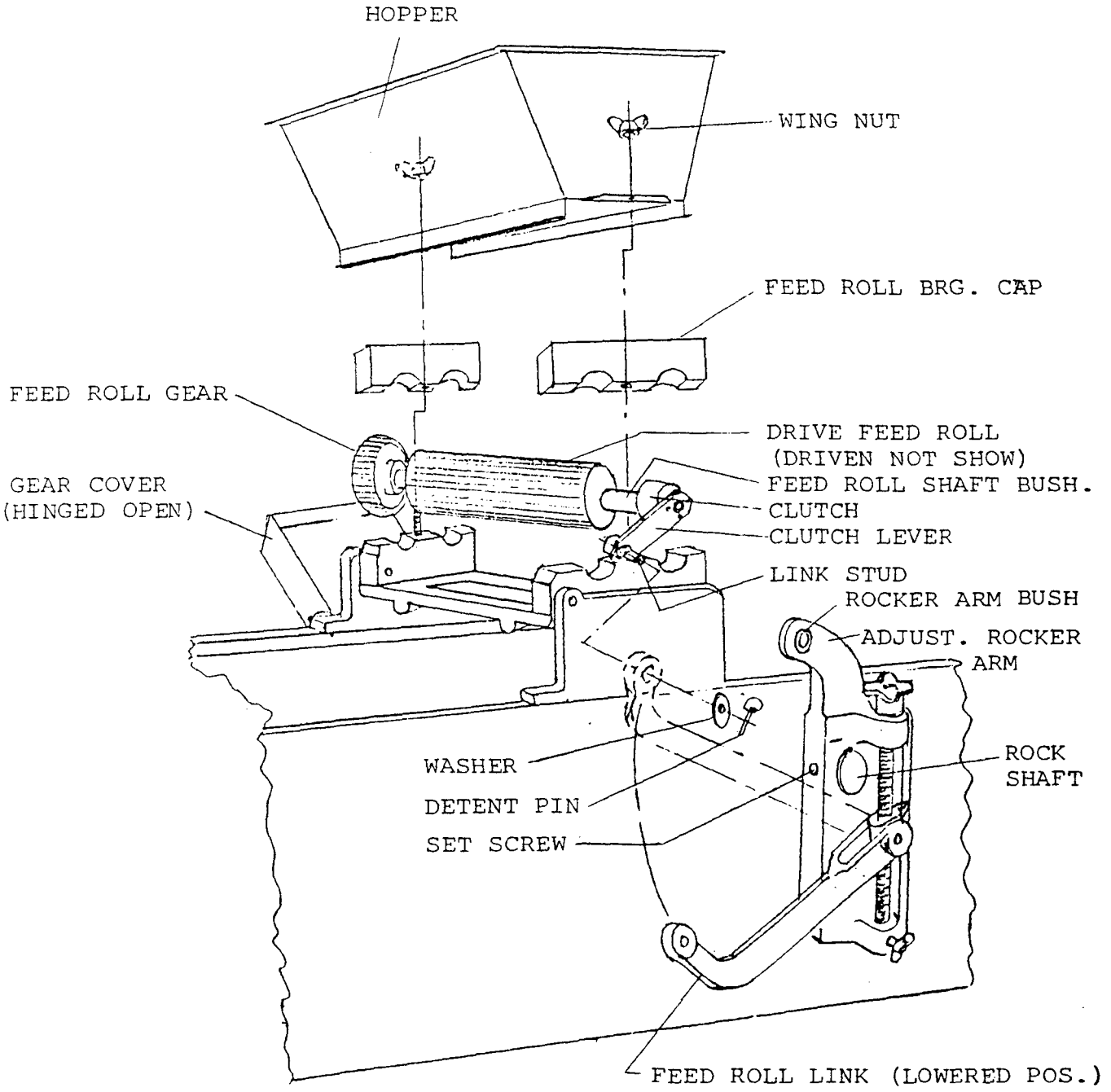
2. TO REPLACE FEED ROLL SHAFT BUSHINGS

To replace bushings it is necessary to remove feed rolls from depositor. There are two wing nuts that hold hopper to feed roll bearings and at the same time fastens bearing caps to bearings, see fig. 5-1 page 5-3 . Remove wing nuts and lift hopper up and off of bearings. Mark bearing caps and bearings to insure correct re-assembly as caps are interchangeable. Lift bearing caps off of bearings. Hinge gear cover open and lower. Remove feed roll link as explained in paragraph I. Feed roll assemblies can now be lifted out of bearings.

Loosen the set screws in the feed roll gear hubs and slide gears off of shafts, remove key from shafts. Loosen set screw in inner hub of clutch and slide clutch with lever off of shaft and remove key. Bushings are held in depositor on shafts with "O" rings. Remove "O" rings from grooves in shafts and remove bushings. Clean ends of shafts and coat with a film of non-toxic lubricant. Slide new bushings on shafts and secure position with the "O" rings. Replace keys in shafts and re-assemble by reversing the disassembly instructions.

3. TO REPLACE ADJUSTABLE ROCKER ARM BUSHING

Block up under finger shaft and table of frame near adjustable rocker arm side. Blocking should just touch shaft, no pressure. Remove feed roll link from stud as explained in paragraph I. Loosen the set screw in arm located on front face of arm adjacent to rock shaft, see fig. 5-1 page 5-3 . This arm assembly weighs approximately 20 lbs., slide off of shaft. Press bushing out of arm and replace. Coat end of finger shaft with non-toxic lubricant, line up keyway in arm with key in shaft and slide unit onto rock shaft and finger shaft. Slide arm




FEED MECHANISM-TAKEN APART
FIGURE 5-1

on shaft until clearance between the arm face and stop collar on finger shaft is about the thickness of a piece of paper and lock set screw. Remove blocking and raise fingers and let drop, it must drop freely. Replace feed roll link. washer and detent pin.

4. TO REPLACE PLAIN ROCKER ARM BUSH.

The plain rocker arm is on the side of the depositor opposite of the adjustable rocker arm, see fig. 4-2 page 4-5. Block up finger shaft on plain rocker arm end, no pressure on shaft. Remove the screw that holds the spring attached to arm and let spring hang. The arm is held to shaft with two set screws, one at bottom and one at 90 degrees toward rear (charge end of depositor). Loosen screws approximately three turns and slide rocker arm off of rock shaft. Press out old bush and replace. Coat end of finger shaft with non-toxic lubricant, line up keyway in arm with key in shaft and slide arm onto rock and finger shaft. When arm is the thickness of paper away from shuttle lever, lock the two set screws in arm. Attach spring to arm, remove blocking from under finger shaft, raise fingers and let drop, it must drop freely.

5. TO REPLACE DRIVE BELT

Plug extension cord to power and turn "on" depositor. On charge end of unit turn the speed adjusting handwheel see fig. 4-3 page 4-5 counter-clockwise until unit is in its highest speed. Turn "off" depositor and pull extension cord out of receptacle. Reach into frame (charge end) and squeeze the belt together right behind the vari-speed pulley. This will pull the belt into the vari-speed pulley allowing slack around the large pulley and belt can be removed. Place new belt into vari-speed pulley, pull belt down into pulley to allow placing belt around large pulley. Turn vari-speed pulley by hand and belts will work out to the correct position in pulley.

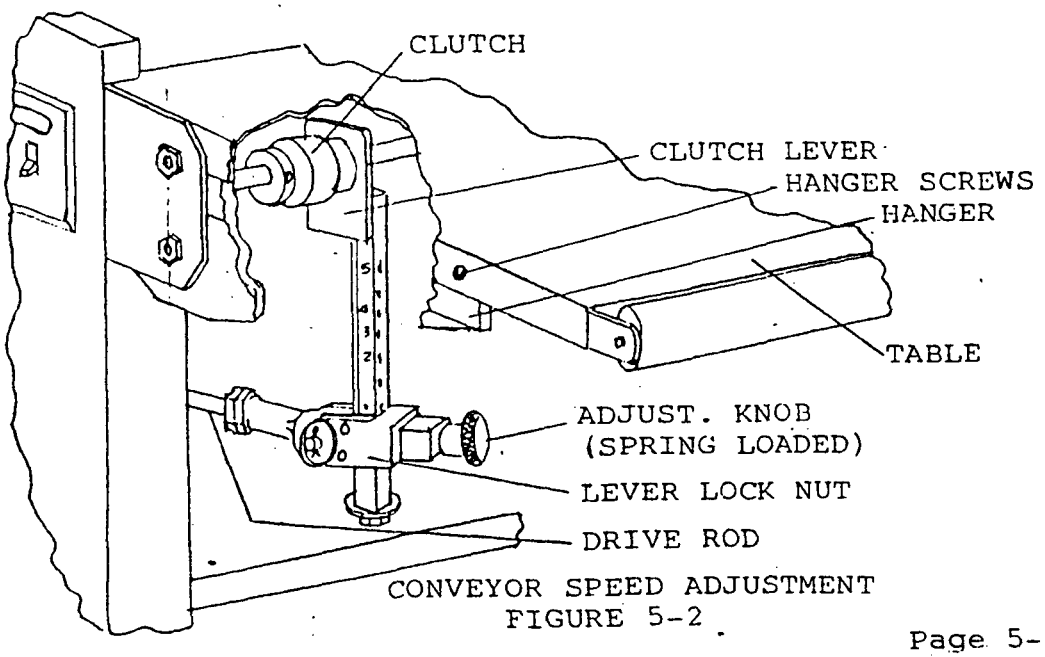
6. TO REPLACE CONVEYOR BELTS

These belts are connected by hooked connectors. To replace, pull belt ends together and un-hook. Place new belts thru frame, up around pulleys and connect by pulling ends together and hooking.

7. TO REPLACE CONVEYOR CLUTCH

To replace the conveyor clutch it is necessary to disconnect conveyor belts as explained in paragraph 6 page 5-4. Remove the table on the charge end, see figure 5-2, . The table is bolted to table hangers, two screws and nuts each side. Remove the four screws and nuts and lift table off of hangers. Move the right side hanger off of shaft end bearing (toward center of frame) and remove hanger from shaft. On left side loosen the set screw in hub of clutch and slide clutch to the right as far as it will go. Move the left side hanger toward the clutch (off of bearing) and remove from shaft. On the bottom of the clutch lever (square rod) is a screw and plain washer, remove. Pull out on adjusting knob (spring loaded) and slide downward until lever lock nut is off of clutch lever. The conveyor shaft rides in bronze bearings (one each end) that are held to the frame with flat head screws and hex nuts. Remove the screws and nuts while holding conveyor shaft and lift assembly out of frame. Remove end bearings from shaft. Slide clutch with the clutch lever assembly out of shaft.

The clutch lever assembly is attached to the face of the clutch with two screws, remove the screws and lever and attach to the new clutch face. Slide clutch and lever onto shaft up to shoulder on right, slide end bearing on each end (note oil hole in bearings towards top) and fasten end bearings to frame. Place table hangers on shaft and over end bearings and let hang. Slide clutch to enable placing lever lock nut up onto clutch lever and replace screw and washer at base of lever. Line up clutch so drive rod is parallel with its line of travel and lock set screw in hub of clutch. Replace table and fasten to hangers with the four screws and nuts.




CONVEYOR SPEED ADJUSTMENT
FIGURE 5-2

SECTION VI

MOTOR


| PARAGRAPH | | PAGE NO. |
|---|---|---|
| 1. | MOTOR TYPE ..... | 6-2 |
| 2. | BEARINGS ..... | 6-2 |
| 3. | MAINTENANCE ..... | 6-2 |
| 4. | LUBRICATION ..... | 6-2 |
| | PRINCIPAL RENEWAL PARTS ..... | 6-3 |

CHARACTERISTICS & PERFORMANCE DATA

EQUIPMENT MANUFACTURE AND P/N Catalog #C202

MANUFACTURE GE

MASTER DRAWING Outline drawing #52a101469p2

CERTIFICATION DATA --------

AUXILIARY ---------

EQUIPMENT MODEL NO. --------

QUANTITY

RATING (HP, VOLTS, PHASE) 1/4 Hp, 115/230V, 1O

INSULATION Class B

WEIGHT Est. 15 #s

CYCLES 60 HZ

DESIGN --------

TORQUE – STARTING 46.6 oz - ft

- FULL LOAD 12.2 oz - ft

AMPERES – STARTING 26.4 amps

- FULL LOAD 5.11 amps

POWER FACTOR

- F.L. 56.6%
- ¾ 49.4%
- ½ 41.3%
- LOCKED 96.6%

ENCLOSURE DP

SERVICE 1.35

DUTY Cont.

TYPE KC

AMB. 40 degree C

F.L. K.W. ------

MOTOR FRAME 48

EQUIPMENT SPEC ------

EFFICIENCY FL Eff. 56.8

SYMBOL NUMBER

MOTOR TYPE

1. The motor supplied with the depositor is a fractional horsepower, single phase, capacitor start motor mounted in a resilient base for quiet operation. The capacitor start motor is almost identical to the split-phase motor, but delivers two to three times the starting torque per ampere of current. It is used on applications where heavy loads must be started and has a 1.35 service factor.

2. BEARINGS

All angle sleeve-bearing motors can be used over a wide range of applications, they can be mounted in any position and are quieter than ball-bearing motors.

3. MAINTENANCE

Motors properly installed are capable of operating for many years with reasonably small amount of maintenance. Before servicing motors and motor operated equipment, disconnect power supply from motor and accessories. Use safe working practices during servicing of equipment. Clean motor surfaces and ventilation openings periodically with a vacuum cleaner. Heavy accumulation of dust and lint will result in overheating and premature failure of the motor.

4. LUBRICATION

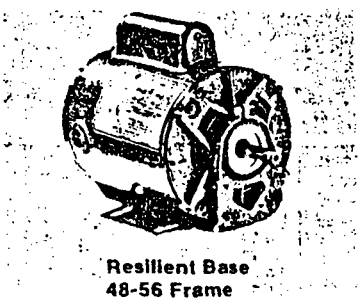
Motors are lubricated at the factory to operate for long periods under normal service conditions without relubrication. Excessive or too frequent lubrication may damage the motor. Lubrication instructions are usually found on the nameplate or terminal box cover fastened to the motor. Lubrication schedule for the motor are as follows:

A.) Every three years of normal operation,

B.) Every year for heavy duty service,

C.) Every 25,000 hours of light duty operation

Oil plugs are on top of the two end bells. Remove the oil plugs and lubricate using SAE 10 non-detergent oil and replace plugs.



Resilient Base
48-56 Frame

PRINCIPAL RENEWAL PARTS

G. E. 5KC36LN3 MOTOR

| QUANTITY | DESCRIPTION | PART NO. |
|---|---|---|
| 1 | CAPACITOR | 8753704AR12 |

# S E C T I O N VII

## CONTROLLER


| PARAGRAPH | | PAGE NO. |
|---|---|---|
| 1. | DESCRIPTION ..... | 7-2 |
| 2. | DEPENDABLE OVERLOAD PROTECTION ..... | 7-2 |
| | PRINCIPAL RENEWAL PARTS ..... | 7-3 |

1. DESCRIPTION

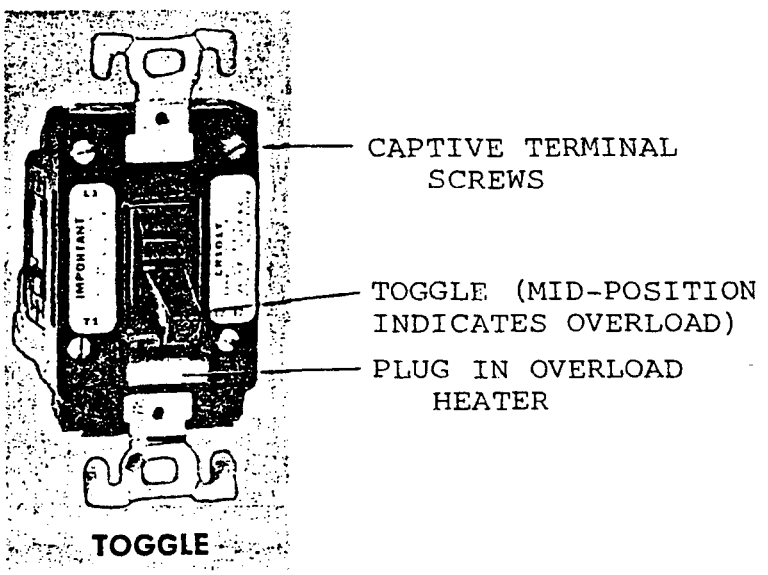
General Electric's CR101H31 manual starter is for use on single phase fractional horsepower motors. It provides dependable overload protection for applications requiring no undervoltage protection. Typical applications include mixers, depositors, blowers, grinders, conveyors, presses, etc.

The starter has straight thru wiring (no need to loop around terminals) and has captive terminal screws. The flush plate carries a indicating light to inform operator that unit is "ON".

2. DEPENDABLE OVERLOAD PROTECTION

Positive bimetallic overload protection is provided by the thermal protection device which automatically opens contacts when an overload occurs and removes the motor from the line. Under overload conditions, the switch toggle moves to the mid-position, giving a positive indication that an overload has occurred. The bimetallic mechanism is completely trip-free so that contacts cannot be reclosed until the bimetallic strip cools. To restart after overload, turn starter to "OFF" and then to "ON".

The overload device includes a heater (a coil of resistance wire) that plugs in from front of switch and is keyed so it cannot be inserted the wrong way.




VIEW OF MANUAL STARTER
FIGURE 7-1

PRINCIPAL RENEWAL PARTS

G.E. CR101H31 MANUAL STARTER

| QUANTITY | DESCRIPTION | PART NO. |
|---|---|---|
| 1 | OVERLOAD HEATER | CR123-H8.02A |

CONTROLLER DATA

MANUFACTURE GE

MASTER DRAWING N/A

CERTIFICATION DATA N/A

RATING (VOLTS, PHASE, HP) 115/230V 1Hp Single Phase

SIZE 3.81 inches X 1.7 inches X 1.56 inches

OPERATON MANUAL

TYPE OPEN

FUNCTION MANUAL STARTER

DUTY CONTINUOUS

LOW – VOLTAGE FEATURE N/A

OVERLOAD RELAY
- Heater Catalog No. To be specified
- Type To be specified
- Emergency Run (Yes/No) To be specified

AMBIENT DEGREES C N/A

ENCLOSURE OPEN

WEIGHT 1 lb.

EQUIPMENT SPECIFICATION N/A

LOCATION N/A

QUANTITY 1

WEIGHT

EQUIPMENT SPECIFICATION

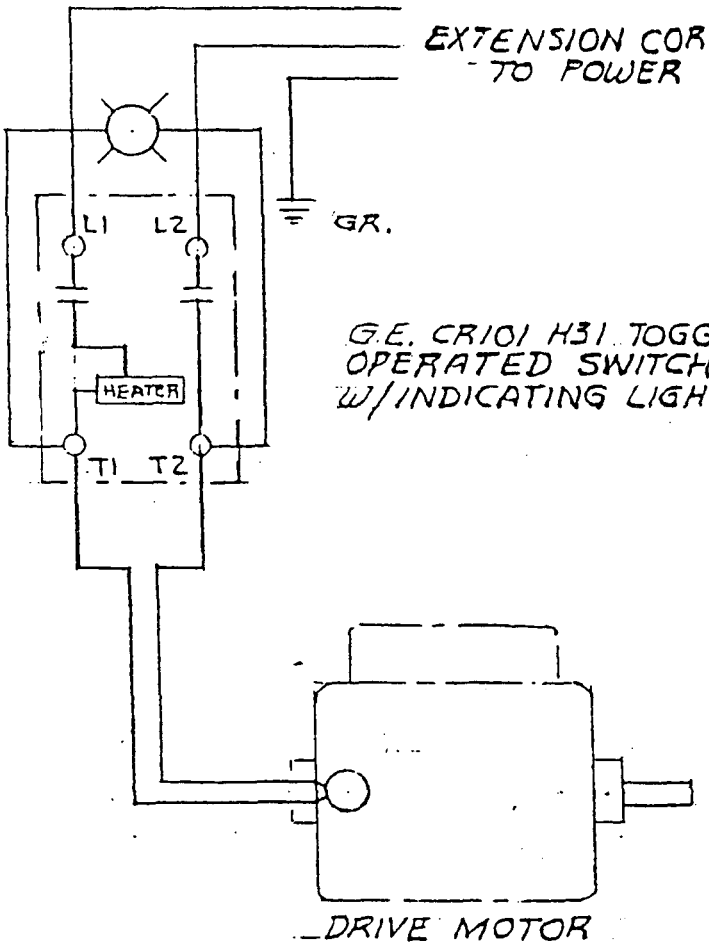
LOCATION

QUANTITY

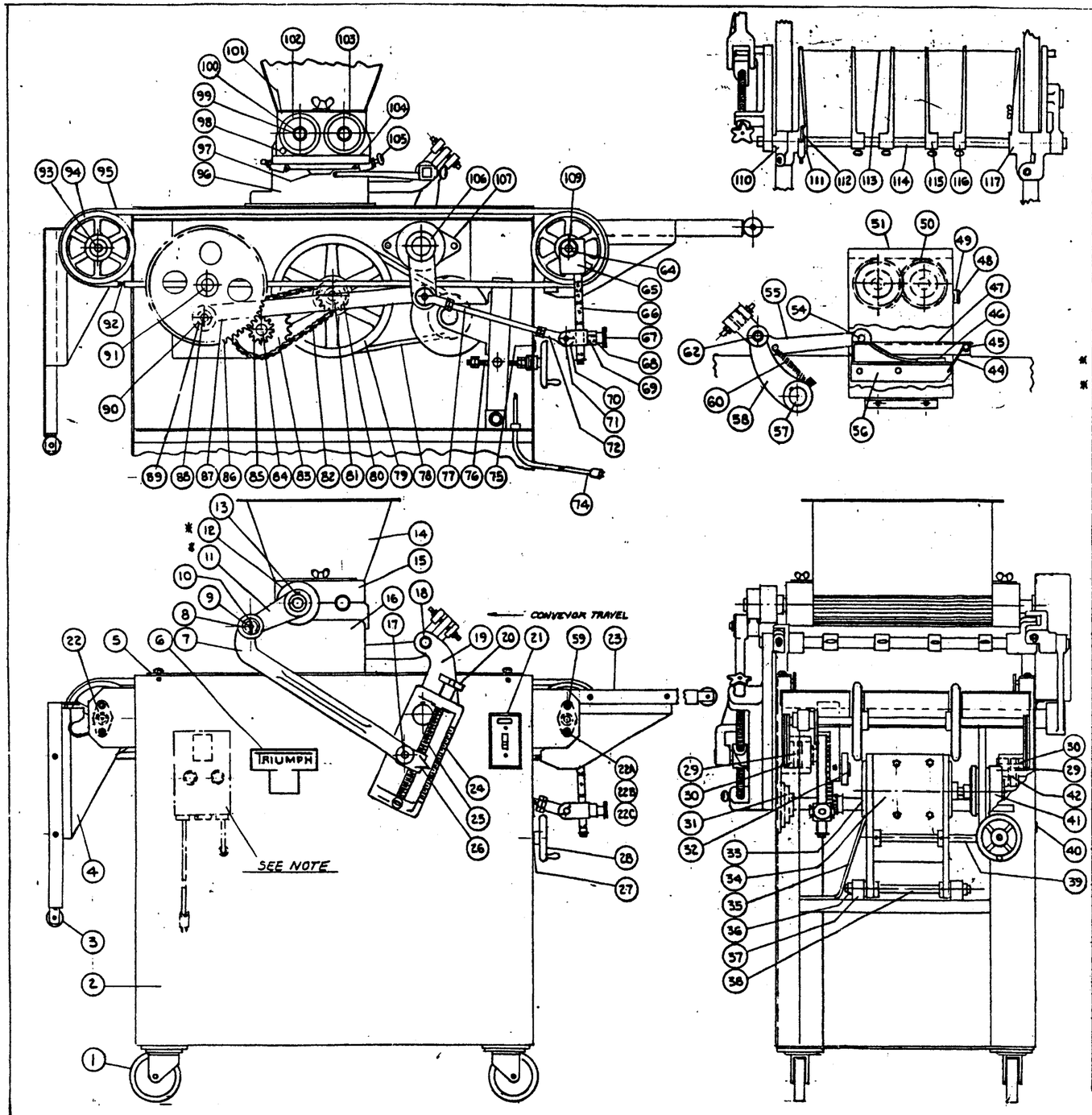
SYMBOL NUMBER

# SECTION VIII


| | PAGE NO. |
|---|---|
| WIRING DIAGRAM ..... | 8-2 |
| DEPOSITOR ASSEMBLY ..... | 8-3 |




## WIRING DIAGRAM
## 17" & 24" HANDY C.D.




| DET. NO. | NO REQ. | PART NO. | NAME OF PART |
|---|---|---|---|
| 1 | 4 | 9-8659 | CASTER |
| A | 4 | | NUT - 1/2-20 HEX |
| B | 4 | | WASHER - 1/2 PLAIN |
| C | 4 | | WASHER - 1/2 LOCK |
| 2 | 1 | 9-3112 | FRAME |
| A | 1 | | CONNECTOR - 3/8 STR. BOX |
| B | 2 | | SCREW - 3/8-16 x 1 SOCK DOG PT. |
| C | 2 | | NUT - 3/8-16 HEX |
| 3 | 2 | 9-2188 | ROLLER |
| A | 4 | | PIN - 3/16 x 1 1/4 TYPE 3 GROOV- |
| 4 | 4 | 9-3170 | END TABLE HANGER |
| A | 4 | | SCREW - 5/16-18 x 3/4 SQ. HD. SET |
| B | 4 | | NUT - 5/16 - 18 HEX JAM |
| C | 8 | | SCREW - 1/4 - 20 x 3/8 RD. HD. MACH. |
| D | 8 | | NUT - 1/4 - 20 HEX |
| 5 | 2 | 9-2300 | PAN GUIDE |
| A | 4 | | SCREW - 5/16 - 18 x 1/2 THUMB |
| 6 | 1 | 1470-A | NAME PLATE |
| A | 2 | | SCREW - 8-32 x 3/8 RD. HD. MACH. |
| 7 | 1 | 9-911 | FEED ROLL LINK |
| A | 1 | | SCREW - 1/4 - 20 x 5/8 SOCK SET |
| B | 1 | | SCREW - 3/8 - 16 x 1 1/4 SOCK SET |
| 8 | 1 | 9-1938 | UNIBAL SPHERICAL BRG. LS510 |
| 9 | 1 | 9-3113 | LINK STUD |
| 10 | 1 | 9-3114 | DETENT PIN |
| A | 1 | | WASHER - 5/8 PLAIN |
| 11 | 1 | | CLUTCH LEVER |
| | | | |
| 12 | 1 | | CLUTCH |
| 13 | 1 | 9-3180 | CLUTCH KEY |
| 14 | 1 | 9-3110 | HOPPER |
| 15 | 1 | 9-3099 | R.H. FEED ROLL BRK. ASSEM. |
| 16 | 1 | 9-2932 | R.H. SUPPORT |
| A | 2 | | SCREW - 1/2 - 13 x 1 SOCK HD. CAP |
| B | 2 | | WASHER - 1/2 LOCK |
| C | 1 | | SCREW - 5/8 - 18 x 1 1/4 SOCK DOG PT. |
| D | 1 | | NUT - 5/8 - 18 HEX |
| 17 | 1 | 9-3120 | ADJUST. BLOCK STUD |
| 18 | 1 | 9-3206 | ROCKER ARM BUSH |
| 19 | 1 | 9-3166 | ADJUST. ROCKER ARM |
| A | 2 | | SCREW - 3/8 - 16 x 3/8 SOCK SET |
| B | 1 | | SCREW - 3/8 - 16 x 3/4 THUMB |
| 20 | 1 | L-160 | HAND KNOB |
| A | 1 | | PIN - 1/8 x 1 TYPE 1 GROOV - |
| 21 | 1 | | TOGGLE SWITCH W/6L. HEATER |
| 22 | 5 | 9-2977 | CONVEYOR SHAFT BEARING |
| A | 8 | | SCREW - 1/4 - 20 x 5/8 FL. HD. |
| B | 8 | | NUT - 1/4 - 20 HEX |
| C | 8 | | WASHER - 1/4 LOCK |
| 23 | 2 | 9-3168 | DROP TABLE |
| 24 | 1 | 9-2355 | GAUGE |
| A | 2 | | SCREW - 8-32 x 1/4 RD HD. |
| 25 | 1 | 9-246 | FEED SCREW |
| 26 | 1 | 9-2956 | ADJUSTING BLOCK |
| A | 1 | | FITTING - V8 ALEMITE WDB. |
| 27 | 2 | 9-848 | LEATHER WASHER |
| 28 | 1 | 9-819 | SPEED ADJ. HANDWHEEL |
| A | 1 | | SCREW - 5/16 x 5/8 SOC. DOG PT. |
| 29 | 2 | 9-1182 | BRAKING SPACER |
| 30 | 4 | 9-1938 | SEALMASTER BRG. RB-16 |
| 31 | 2 | 9-1934 | FLANGE BEARING |
| A | 8 | | SCREW - 1/4 - 20 x 1 HEX CAP |
| B | 8 | | WASHER - 1/4 LOCK |
| 32 | 1 | 9-3140 | ROCK SHAFT LEVER STUD |
| A | 1 | | WASHER - 1/2 PLAIN |
| B | 1 | | PIN - 1/8 x 1 COTTER |
| 33 | 1 | | MOTOR |
| A | 4 | | SCREW - 5/16 - 18 x 1 HEX HD. |
| B | 4 | | WASHER - 5/16 PLAIN |
| C | 4 | | WASHER - 5/16 LOCK |
| D | 4 | | NUT - 5/16 - 18 HEX |
| 34 | 1 | 9-814 | MOTOR BASE |
| 35 | 1 | 9-1930 | MOTOR CORD |
| 36 | 2 | 3428-L | MOTOR BASE BUSHING |
| 37 | 2 | 201-N | BASE PIVOT BLOCK |
| A | 2 | | SCREW - 5/16 - 18 x 5/8 HEX CAP |
| B | 2 | | WASHER - 5/16 LOCK |
| 38 | 1 | 9-811 | PIVOT ROD |
| A | 2 | | COLLAR - 5/8 STD. SET |
| 39 | 1 | 9-1230 | ADJUST. SHAFT |
| A | 2 | 9-2983 | COLLAR - 5/4 STD. SET |
| 40 | 1 | 9-3167 | SPEED GAGE |
| 41 | 1 | 9-1940 | VARI-SPEED PULLEY |
| 42 | 1 | 9-1229 | DRIVEN SHEAVE SHAFT |
| A | 2 | | KEY, "A" WOODRUFF |
| 43 | | | |
| 44 | 1 | 9-524 | SHUTTLE SPRING |
| 45 | 1 | 9-3120 | SHUTTLE SPRING SPACER |
| 46 | 1 | L-529 | SHUTTLE BUMPER |
| 47 | 1 | 9-3148 | SHUTTLE |
| A | 1 | | SCREW - 1/2 - 13 x 1 SOCK HD. CAP |
| B | 2 | | SCREW - 3/8 - 16 x 1 1/2 HEX CAP |
| C | 1 | | WASHER - 3/8 LOCK |
| D | 1 | | SPRING CLIP |
| E | 1 | | SCREW - 8-32 x 1/4 RD. HD. |
| 48 | 1 | 9-1059 | BACKING PLATE |
| 49 | 1 | 9-2970 | FEED ROLL GEAR |
| 50 | 2 | 9-3206 | SCREW - 3/8 - 24 x 3/8 SOCK SET |
| 51 | 1 | 9-3186 | GEAR / SHUTTLE COVER |
| A | 3 | | SCREW - 1/4 - 28 x 3/8 RD. HD. F. SOC. |
| B | 1 | | NUT - 1/4 - 20 HEX |
| C | 2 | | |
| D | 4 | | |
| A | 2 | | |
| B | 2 | | |
| C | 2 | | |
| D | 4 | | |
| 52 | 1 | 9-1270 | SHUTTLE STUD |
| 53 | 1 | 9-2992 | SHUTTLE LEVER |
| A | 1 | | SCREW - 3/8 - 16 x 3/8 SOCK SET |
| B | 2 | | SCREW - 3/8 - 16 x 1 1/4 SOCK DOG PT. |
| C | 2 | | NUT - 3/8 - 16 HEX |
| 54 | 1 | 9-1349 | SHUTTLE TRACK |
| 55 | 1 | | SCREW - 3/8 - 16 x 1 HEX CAP |
| | | | |
| 56 | 1 | | CLUTCH |
| A | 2 | | SCREW - 3/8 - 16 x 1 SOCK SET |
| B | 2 | | WASHER - 3/8 LOCK |
| 57 | 1 | 9-1191 | ROCK SHAFT |
| A | 1 | | KEY - "D" WOODRUFF |
| B | 2 | | SCREW - 3/8 - 16 x 1 1/4 SOCK DOG PT. SET |
| C | 2 | | NUT - 3/8 - 16 HEX |
| 58 | 1 | 9-3164 | PLAIN ROCKER ARM |
| A | 2 | | SCREW - 5/16 - 18 x 5/8 SOCK SET |
| 59 | 1 | 9-3471 | CONVEYOR DRIVE SHAFT BRG. |
| A | 1 | | SCREW - 3/8 - 16 x 3/8 SOCK SET |
| 60 | 1 | G58-N | SHUTTLE LEVER SPRING |
| A | 2 | | SCREW - 3/8 - 16 x 1 1/4 SOCK DOG PT. |
| 61 | | | NUT - 3/8 - 16 HEX |
| 62 | 1 | 9-3185 | PLAIN ROCKER ARM BUSH |
| 63 | | | |
| 64 | 1 | 9-3476 | CLUTCH (WRAP SPRING) |
| A | 1 | | SCREW - 1/4 - 20 x 1/2 SOCK SET |
| 65 | 1 | 9-3473 | CLUTCH LEVER |
| A | 2 | | SCREW - 10-24 x 1/2 SOCK HD. CAP |
| 66 | 1 | 9-3178 | CONVEYOR SPEED GAGE |
| 67 | 1 | 9-3174 | SPRING PLUNGER KNOB |
| A | 2 | | SCREW - 1/4 - 20 x 1/4 SOCK SET |
| 68 | 1 | 9-3175 | SPRING PLUNGER |
| 69 | 1 | 2-235 | COMPRESSION SPRING |
| 70 | 1 | 9-3177 | LEVER LOCK NUT |
| A | 2 | | PIN - 1/4 x 1 1/4 TYPE 1 GROOV- |
| 71 | 1 | 9-3172 | LOCK NUT PIN |
| A | 2 | | PIN - 3/32 x 3/4 COTTER |
| 72 | 2 | 9-3091 | ROD END BEARING |
| 73 | | | |
| 74 | 1 | 819-H | EXTENSION CORD |
| 75 | 1 | 9-3163 | MACHINE SPEED GAGE |
| 76 | 1 | 9-815 | ADJUSTING SCREW |
| A | 4 | | NUT - 5/8 - 18 HEX JAM |
| B | 2 | | WASHER - 5/8 PLAIN |
| 77 | 1 | 9-2084 | DRIVE ROD |
| A | 2 | | NUT - 1/2 - 20 HEX JAM |
| 78 | 1 | 9-1902 | VEE BELT |
| 79 | 1 | 9-1923 | DRIVEN SHEAVE |
| 80 | 1 | 9-1925 | DRIVEN SHEAVE |
| 81 | 1 | 9-1231 | BEARING WASHER |
| 82 | 1 | 9-2212 | DRIVE CHAIN |
| 83 | 1 | 9-2193 | DRIVEN SPROCKET |
| 84 | 1 | 9-1295 | DRIVE SHAFT |
| A | 2 | | KEY - "A" WOO. |
| 85 | 1 | 9-122 | CRANK PINION |
| 86 | 1 | 9-1374 | CRANK GEAR |
| A | 1 | | SCREW - 5/8 - 18 x 5/8 SOCK SET |
| B | 1 | | SCREW - 1/8 - 40 x 3/8 RD. HD. SET |
| 87 | 1 | 9-3161 | DRIVING LINK |
| A | 2 | | FITTING - V8 x 90 ALEMITE |
| 88 | 1 | 9-1185 | CRANK PIN |
| A | 1 | | PIN - 3/16 x 1 3/4 COTTER |
| 89 | 2 | 9-1933 | UNIBAL SPHERICAL BRG. |
| 90 | 2 | 9-1184 | BEARING WASHER |
| 91 | 1 | 9-1186 | DRIVE STUD |
| 92 | 1 | 9-396 | COUPLING & TENSIONER |
| 93 | 1 | 9-1186 | CONVEYOR SHAFT |
| 94 | 1 | 9-3171 | CONVEYOR PULLEY |
| 95 | 2 | 9-3172 | CONVEYOR CLUTCH ASSEM. |
| 96 | 1 | 9-2953 | L.H. SUPPORT |
| A | 2 | | SCREW - 1/2 - 13 x 1 SOCK HD. CAP |
| B | 2 | | WASHER - 1/2 LOCK |
| C | 1 | | SCREW - 3/8 - 16 x 1 HEX CAP |
| D | 1 | | NUT - 3/8 - 16 HEX |
| 97 | 1 | 9-288 | HOPPER HINGE PIN |
| 98 | 4 | 9-3204 | FEED ROLL SHAFT BEARINGS |
| 99 | 4 | 5579-K | LINEAR "O" RINGS |
| 100 | 4 | 9-3189 | L.H. FEED ROLL SHAFT BRG. |
| 101 | 1 | 9-3189 | DRIVE FEED ROLL ASSEM. |
| 102 | 1 | 9-3699 | DRIVEN FEED ROLL ASSEM. |
| 103 | 1 | 9-3204 | FEED ROLL FRAME |
| 104 | 1 | 9-2134 | PIN - 4X1 TAPER |
| A | 2 | | SCREW - 3/8 - 16 x 2 1/4 SQ. HD. CONE PT. |
| B | 2 | | NUT - 3/8 - 16 HEX JAM |
| C | 2 | | SCREW - 3/8 - 16 x 3/4 HEX |
| D | 4 | | DIE SCREW |
| 105 | 2 | 9-1377 | ROCK SHAFT LEVER |
| 106 | 1 | 9-2760 | SCREW - 3/8 - 16 x 3/8 SOCK SET |
| A | 2 | | FLANGE BEARING |
| 107 | 2 | 9-1916 | SCREW - 1/2 - 13 x 1 HEX CAP |
| 108 | | | WASHER - 1/2 LOCK |
| 109 | 1 | 9-3472 | CONVEYOR DRIVE SHAFT |
| 110 | 1 | 9-2359 | STOP COLLAR |
| A | 1 | | SCREW - 3/8 - 16 x 3/8 SOCK SET |
| B | 2 | | SCREW - 3/8 - 16 x 1 1/4 SOCK DOG PT. SET |
| C | 2 | | NUT - 3/8 - 16 HEX |
| 111 | 1 | 9-1645 | RIGHT HAND FINGER |
| A | 1 | | SCREW - 3/8 - 16 x 3/8 SOCK SET |
| 112 | 1 | L-118 | WIRE ADJUST. SCREW |
| A | 1 | | NUT - 1/4 - 20 WING |
| 113 | 1 | 9-408 | CUT-OFF WIRE |
| 114 | 1 | 9-3232 | FINGER SHAFT |
| A | 2 | | KEY "A" WOODRUFF |
| B | 1 | | COLLAR - 1 3/4 STD. SET |
| 115 | 2 | 9-4939 | L.H. SLIP FINGER |
| A | 2 | | SCREW - 3/4 - 16 x 5/8 THUMB |
| 116 | 2 | 9-2958 | R.H. SLIP FINGER |
| A | 2 | | SCREW - 3/8 - 16 x 5/8 THUMB |
| 117 | 1 | 9-1696 | L.H. FINGER |
| A | 1 | | SCREW - 3/8 - 16 x 1/2 SOCK SET |
| B | 1 | | SCREW - 1/4 - 20 x 1 1/4 RD HD. MACH. |
| C | 1 | | NUT - 1/4 - 20 WING |

* STANDARD DEPOSITOR -
DET. NO. 11 - 9-1606 CLUTCH LEVER
A - (2) SCREW - 1/4 - 20 x 1/2 HEX CAP
DET. NO. 12 - 9-3176 WRAP SPRING - CLUTCH
A - (1) SCREW - 1/4 - 20 x 1/4 SOCK SET

* DEPOSITOR W/HI-TORQUE CLUTCH -
DET. NO. 11 - 9-2969 CLUTCH LEVER
A - (1) SCREW - 3/8 - 16 x 3/4 SOCK SET
DET. NO. 12 - 9-1987 POWERSPRING OVER RUN CLUTCH

1 - NEW CLUTCH LEVER
9-3489

NOTE!
MAGNETIC STARTER 13
AS PER ORDER, REPLACES
DETAIL Nº 21

31171

HANDY
VARIABLE SPEED DEPOSITOR
THE TRIUMPH/MAGNA MIXER COMPANY
CINCINNATI, OHIO, 45240
DRAWING NO.
DRAWN 9-16-59 3520

(Insert Classification of TMDER Here) CLASSIFICATION:

REF: NAVSEAINST 4160.3A
NAVSEA S0005-AA-GYD-030/TMMP

# NAVSEA/SPAWAR TECHNICAL MANUAL DEFICIENCY/EVALUATION REPORT (TMDER)

INSTRUCTION: Continue on 8-1/2" X 11" paper if additional space is needed.

1. USE THIS REPORT TO INDICATE DEFICIENCIES, PROBLEMS, AND RECOMMENDATIONS RELATING TO THIS PUBLICATION.
2. FOR CLASSIFIED TMDERS, SEE OPNAVINST 5510H FOR MAILING CLASSIFIED TMDERS.
3. SUBMIT TMDERS BY MAIL OR USE WEB SITE http://nsdsa.nswses.navy.mil

| 1. PUB NO. | 2. VOL./ PART | 3. REV. NO./DATE OR TM CH. NO./DATE | 4. SYSTEM/EQUIPMENT IDENTIFICATION |
|---|---|---|---|
| | | | |

| 5. TITLE: | 6. REPORT CONTROL NUMBER |
|---|---|
| | |

7. RECOMMENDED CHANGES TO THIS MANUAL

| PAGE NO. A | PARA-GRAPH B. | C. RECOMMENDED CHANGES AND REASONS |
|---|---|---|
| | | |

| 8. ORIGINATOR'S NAME AND WORK CENTER (Please Print) | 9. DATE | 10. DSN/COMM NO. | 11. TRANSMITTED TO |
|---|---|---|---|
| | | | |

| 12. SHIP HULL NO. AND/OR STATION ADDRESS (DO NOT ABBREVIATE) | 13. EMAIL ADDRESS (Originator) |
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